

CLAIMS

What is claimed is:

- 1 1. A method for provisioning databases for users on a wide area network, the method
2 comprising the steps of:
3 a first party managing one or more database systems;
4 a plurality of second parties subscribing to database services supported by the one
5 or more database systems managed by the first party; and
6 providing, over a network, to database applications controlled by the second
7 parties, access to the database services to which the second parties are
8 subscribed.
- 1 2. The method of claim 1 wherein:
2 at least one of said second parties is an application service provider that provides
3 application services to a plurality of third parties over said network; and
4 the step of providing access to the database services includes providing database
5 services to an application used by said application service provider to
6 provide said application services to said third parties.
- 1 3. The method of claim 1 further comprising the steps of:
2 receiving over said network a request to perform a database management operation
3 from a user associated with a particular second party of said plurality of
4 second parties; and
5 responding to said request by performing said database management operation on
6 one or more databases controlled by said first party without human
7 intervention by said first party.

1 4. The method of claim 1 wherein the one or more database systems are implemented
2 on a set of database devices that include a plurality of database appliances, a database
3 appliance comprising database software and non-database software tailored to the needs of
4 the database software.

1 5. The method of claim 1 wherein the step of providing access over a network
2 includes providing access over a public network of computer networks.

1 6. The method of claim 3 wherein the step of performing the database management
2 operation involves allocating a different amount of resources to said particular second
3 party than is currently allocated for said particular second party.

1 7. The method of claim 1, further comprising the step of delivering to a party over the
2 network one or more messages which cause generation of user interfaces that allow the
3 party to subscribe to said database services provided by said first party.

1 8. The method of claim 7 wherein the user interfaces contain controls for specifying
2 user profile information, payment information, and selection of database services.

1 9. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that allow the user to access a database for a database service
4 to which said one of said second parties has subscribed.

1 10. The method of claim 1, wherein:
2 the first party also provides database application services over said network; and
3 the method further comprises the step of delivering over the network, to a user
4 associated with one of said second parties, one or more messages which

5 cause generation of user interfaces that allow the user to access a database
6 application service to which said one of said second parties has subscribed.

1 11. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that allow the user to indicate changes to at least one of
4 profile information, payment information, and the selection of services to which said one
5 of said second parties is subscribed.

1 12. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that allow the user to supply content for a subscribed
4 database.

1 13. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that allow the user to develop a new database application.

1 14. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that allow the user to integrate an external service.

1 15. The method of claim 1, further comprising the step of delivering over the network,
2 to a user associated with one of said second parties, one or more messages which cause
3 generation of user interfaces that present a status of a user subscribed resource selected
4 from database resources managed by said first party.

1 16. The method of claim 1, further comprising the steps of:

2 delivering over the network, to a user associated with one of said second parties,
3 one or more messages which cause generation of user interfaces that
4 present the user with a user-selectable representation of a wizard for
5 building a Web page with a database component associated with an
6 interface to a database;
7 receiving user input indicating the wizard; and
8 executing said wizard, including presenting a series of screens to the user to
9 prompt user input for building the Web page.

1 17. The method of claim 1, further comprising the step of the first party updating the
2 one or more database systems by receiving from a community server over the network an
3 update to the one or more database systems, wherein the community server provides the
4 update to a plurality of service providers over said network.

1 18. The method of claim 1, further comprising the step of the first party sending to a
2 community server a status of a user subscribed resource, wherein the user subscribed
3 resource is maintained by said first party.

1 19. The method of claim 1, further comprising presenting to a user associated with
2 said first party a user interface to allow said first party to configure a database device used
3 to provide said database services as one of a dedicated device and a plurality of virtual
4 devices.

1 20. The method of claim 1, further comprising presenting to a user associated with
2 said first party a user interface to allow said first party to configure at least one of a
3 dedicated device and a virtual device of a plurality of virtual devices as one of a staging
4 device available only to a database service developer for developing database services,

5 and a production device for making database services available to a user who is not the
6 database service developer.

1 21. The method of claim 20, further comprising presenting a user interface for
2 transferring an application from a staging device to a production device.

1 22. The method of claim 7 wherein:
2 the step of delivering to a party over the network one or more messages which
3 cause generation of user interfaces that allow the party to subscribe to said
4 database services is performed as part of a registration process;
5 the interfaces include controls for receiving a user input value for a maximum
6 amount of subscribed resources; and
7 the method further includes the step of presenting an alert if an amount of
8 subscribed resources consumed by said party exceeds a threshold
9 percentage of the maximum amount of subscribed resources.

1 23. The method of claim 22, further comprising the steps of:
2 receiving a user input value for a particular threshold percentage; and
3 presenting an alert if an amount of resources consumed by said party exceeds the
4 particular threshold percentage of the maximum amount of subscribed
5 resources.

1 24. The method of claim 22, wherein the maximum amount of subscribed resources
2 includes a maximum amount of at least one of
3 an amount of storage space,
4 a number of users connected to a platform in a period of time,
5 an amount of processor time used in a period of time, and

6 a number of transactions completed in a period of time.

1 25. The method of claim 12, further comprising the steps of:
2 presenting to the user a set of selectable sources of content;
3 receiving user input indicating a selected source; and
4 launching a source update process to connect to the selected source and update a
5 database with information received from the selected sources.

1 26. The method of claim 25, wherein
2 the user input indicating a selected source also indicates a schedule for updating
3 from the selected source; and
4 the source update process connects to the selected source according to the schedule
5 for updating from the selected source.

1 27. The method of claim 12, further comprising the steps of:
2 in response to user input that specifies that data should be loaded into a subscribed
3 database, determining whether the subscribed database currently exists for
4 said one of said second parties; and
5 creating the subscribed database if the subscribed database does not currently exist
6 for said one of said second parties.

1 28. The method of claim 13, further comprising the steps of:
2 presenting representations of selectable application development kits;
3 receiving user input indicating a selected development kit from the user; and
4 launching a staging process including
5 configuring consumable database resources on a staging database device,
6 wherein a staging database device can be accessed by the user for

7 developing the new database application and cannot be accessed by
8 users associated with other parties of said plurality of second
9 parties,
10 receiving development input from the user; and
11 building a new application on the staging database device based on the
12 selected development kit and the development input.

1 29. The method of claim 28, the step of developing the new database application
2 further comprising the steps of
3 after receiving user input indicating a selected development kit, determining
4 whether a client process of the selected development kit must be
5 downloaded to a computer of the user over the wide area network; and
6 if it is determined the client process of the selected development kit must be
7 downloaded, downloading the client process to the computer of the user
8 over the wide area network before the step of building the new application.

1 30. The method of claim 28, the step of developing a new database application further
2 comprising the steps of:
3 receiving input from the user indicating the new application is ready for
4 operational use; and
5 in response to receiving input from the user indicating the new application is ready
6 for operational use, launching a production transfer process including
7 sending a request to the first party to transfer the new application to a
8 production device on which the new application may be accessed by users
9 who did not develop the new application.

1 31. The method of claim 14, further comprising integrating the external service,
2 wherein the step of integrating comprises the steps of:
3 presenting a representation of a selectable external service;
4 receiving user input indicating a selected external service; and
5 launching an integration process to provide the external service to the user.

1 32. The method of claim 31, wherein the selectable external service includes at least
2 one of a payment service, a mobile Internet portal, an enterprise resource planning
3 application, and a customer relationship management application.

1 33. The method of claim 1, further comprising the first party performing at least one of
2 the steps of:
3 setting up database parameters;
4 reporting database usage;
5 backing up the database;
6 upgrading the database;
7 controlling database versions;
8 implementing database security; and
9 implementing data security within the database.

1 34. The method of claim 1, further comprising the steps of:
2 if a costing database does not already exist, then
3 automatically creating the costing database of database resource usage by
4 user, and
5 initiating a costing model with price per unit of consumable resource per
6 service;

7 inserting data into the costing database based on actual use of database resources
8 by the user;
9 executing the costing model to compute a cost-per-user based on the data in the
10 costing database and the price per unit of consumable resource per service;
11 and
12 billing the user for the cost computed by the costing model.

1 35. The method of claim 33, wherein the costing model supports:
2 fixed price per unit of usage;
3 variable price per unit usage as a function of usage;
4 flat price up to a maximum value of usage;
5 different prices for different users;
6 different prices for different services; and
7 different prices for increments of usage above a maximum subscribed usage.

1 36. A computer-readable medium carrying instructions for provisioning databases for
2 users on a wide area network, the instructions comprising instructions for performing the
3 steps of:
4 a first party managing one or more database systems;
5 a plurality of second parties subscribing to database services supported by the one
6 or more database systems managed by the first party; and
7 providing, over a network, to database applications controlled by the second
8 parties, access to the database services to which the second parties are
9 subscribed.

1 37. The computer-readable medium of claim 36 wherein:

2 at least one of said second parties is an application service provider that provides
3 application services to a plurality of third parties over said network; and
4 the step of providing access to the database services includes providing database
5 services to an application used by said application service provider to
6 provide said application services to said third parties.

1 38. The computer-readable medium of claim 36 further comprising instructions for
2 performing the steps of:
3 receiving over said network a request to perform a database management operation
4 from a user associated with a particular second party of said plurality of
5 second parties; and
6 responding to said request by performing said database management operation on
7 one or more databases controlled by said first party without human
8 intervention by said first party.

1 39. The computer-readable medium of claim 36 wherein the one or more database
2 systems are implemented on a set of database devices that include a plurality of database
3 appliances, a database appliance comprising database software and non-database software
4 tailored to the needs of the database software.

1 40. The computer-readable medium of claim 36 wherein the step of providing access
2 over a network includes providing access over a public network of computer networks.

1 41. The computer-readable medium of claim 38 wherein the step of performing the
2 database management operation involves allocating a different amount of resources to said
3 particular second party than is currently allocated for said particular second party.

1 42. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering to a party over the network one or more messages which
3 cause generation of user interfaces that allow the party to subscribe to said database
4 services provided by said first party.

1 43. The computer-readable medium of claim 42 wherein the user interfaces contain
2 controls for specifying user profile information, payment information, and selection of
3 database services.

1 44. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of said
3 second parties, one or more messages which cause generation of user interfaces that allow
4 the user to access a database for a database service to which said one of said second
5 parties has subscribed.

1 45. The computer-readable medium of claim 36, wherein:
2 the first party also provides database application services over said network; and
3 the computer-readable medium further comprises instructions for performing the
4 step of delivering over the network, to a user associated with one of said
5 second parties, one or more messages which cause generation of user
6 interfaces that allow the user to access a database application service to
7 which said one of said second parties has subscribed.

1 46. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of
3 said second parties, one or more messages which cause generation of user
4 interfaces that allow the user to indicate changes to at least one of profile

5 information, payment information, and the selection of services to which said one
6 of said second parties is subscribed.

1 47. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of
3 said second parties, one or more messages which cause generation of user
4 interfaces that allow the user to supply content for a subscribed database.

1 48. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of
3 said second parties, one or more messages which cause generation of user
4 interfaces that allow the user to develop a new database application.

1 49. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of
3 said second parties, one or more messages which cause generation of user
4 interfaces that allow the user to integrate an external service.

1 50. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of delivering over the network, to a user associated with one of
3 said second parties, one or more messages which cause generation of user
4 interfaces that present a status of a user subscribed resource selected from database
5 resources managed by said first party.

1 51. The computer-readable medium of claim 36, further comprising instructions for
2 performing the steps of:
3 delivering over the network, to a user associated with one of said second parties,
4 one or more messages which cause generation of user interfaces that
5 present the user with a user-selectable representation of a wizard for

6 building a Web page with a database component associated with an
7 interface to a database;
8 receiving user input indicating the wizard; and
9 executing said wizard, including presenting a series of screens to the user to
10 prompt user input for building the Web page.

1 52. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of the first party updating the one or more database systems by
3 receiving from a community server over the network an update to the one or more
4 database systems, wherein the community server provides the update to a plurality of
5 service providers over said network.

1 53. The computer-readable medium of claim 36, further comprising instructions for
2 performing the step of the first party sending to a community server a status of a
3 user subscribed resource, wherein the user subscribed resource is maintained by
4 said first party.

1 54. The computer-readable medium of claim 36, further comprising instructions for
2 presenting to a user associated with said first party a user interface to allow said first party
3 to configure a database device used to provide said database services as one of a dedicated
4 device and a plurality of virtual devices.

1 55. The computer-readable medium of claim 36, further comprising instructions for
2 presenting to a user associated with said first party a user interface to allow said first party
3 to configure at least one of a dedicated device and a virtual device of a plurality of virtual
4 devices as one of a staging device available only to a database service developer for
5 developing database services, and a production device for making database services
6 available to a user who is not the database service developer.

1 56. The computer-readable medium of claim 55, further comprising instructions for
2 presenting a user interface for transferring an application from a staging device to a
3 production device.

1 57. The computer-readable medium of claim 42 wherein:
2 the step of delivering to a party over the network one or more messages which
3 cause generation of user interfaces that allow the party to subscribe to said
4 database services is performed as part of a registration process;
5 the interfaces include controls for receiving a user input value for a maximum
6 amount of subscribed resources; and
7 the computer-readable medium further includes instructions for the step of
8 presenting an alert if an amount of subscribed resources consumed by said
9 party exceeds a threshold percentage of the maximum amount of
10 subscribed resources.

1 58. The computer-readable medium of claim 57, further comprising instructions for
2 performing the steps of:
3 receiving a user input value for a particular threshold percentage; and
4 presenting an alert if an amount of resources consumed by said party exceeds the
5 particular threshold percentage of the maximum amount of subscribed
6 resources.

1 59. The computer-readable medium of claim 57, wherein the maximum amount of
2 subscribed resources includes a maximum amount of at least one of
3 an amount of storage space,
4 a number of users connected to a platform in a period of time,
5 an amount of processor time used in a period of time, and

6 a number of transactions completed in a period of time.

1 60. The computer-readable medium of claim 47, further comprising instructions for
2 performing the steps of:

3 presenting to the user a set of selectable sources of content;

4 receiving user input indicating a selected source; and

5 launching a source update process to connect to the selected source and update a
6 database with information received from the selected sources.

1 61. The computer-readable medium of claim 60, wherein

2 the user input indicating a selected source also indicates a schedule for updating

3 from the selected source; and

4 the source update process connects to the selected source according to the schedule
5 for updating from the selected source.

1 62. The computer-readable medium of claim 47, further comprising instructions for
2 performing the steps of:

3 in response to user input that specifies that data should be loaded into a subscribed

4 database, determining whether the subscribed database currently exists for

5 said one of said second parties; and

6 creating the subscribed database if the subscribed database does not currently exist
7 for said one of said second parties.

1 63. The computer-readable medium of claim 48, further comprising instructions for
2 performing the steps of:

3 presenting representations of selectable application development kits;

4 receiving user input indicating a selected development kit from the user; and

5 launching a staging process including
6 configuring consumable database resources on a staging database device,
7 wherein a staging database device can be accessed by the user for
8 developing the new database application and cannot be accessed by
9 users associated with other parties of said plurality of second
10 parties,
11 receiving development input from the user; and
12 building a new application on the staging database device based on the
13 selected development kit and the development input.

1 64. The computer-readable medium of claim 63, the step of developing the new
2 database application further comprising the steps of
3 after receiving user input indicating a selected development kit, determining
4 whether a client process of the selected development kit must be
5 downloaded to a computer of the user over the wide area network; and
6 if it is determined the client process of the selected development kit must be
7 downloaded, downloading the client process to the computer of the user
8 over the wide area network before the step of building the new application.

1 65. The computer-readable medium of claim 63, the step of developing a new database
2 application further comprising the steps of:
3 receiving input from the user indicating the new application is ready for
4 operational use; and
5 in response to receiving input from the user indicating the new application is ready
6 for operational use, launching a production transfer process including
7 sending a request to the first party to transfer the new application to a

8 production device on which the new application may be accessed by users
9 who did not develop the new application.

1 66. The computer-readable medium of claim 49, further comprising instructions for
2 integrating the external service, wherein the step of integrating comprises the steps of:
3 presenting a representation of a selectable external service;
4 receiving user input indicating a selected external service; and
5 launching an integration process to provide the external service to the user.

1 67. The computer-readable medium of claim 66, wherein the selectable external
2 service includes at least one of a payment service, a mobile Internet portal, an enterprise
3 resource planning application, and a customer relationship management application.

1 68. The computer-readable medium of claim 36, further comprising instructions for
2 the first party performing at least one of the steps of:
3 setting up database parameters;
4 reporting database usage;
5 backing up the database;
6 upgrading the database;
7 controlling database versions;
8 implementing database security; and
9 implementing data security within the database.

1 69. The computer-readable medium of claim 36, further comprising instructions for
2 performing the steps of:
3 if a costing database does not already exist, then

4 automatically creating the costing database of database resource usage by
5 user, and
6 initiating a costing model with price per unit of consumable resource per
7 service;
8 inserting data into the costing database based on actual use of database resources
9 by the user;
10 executing the costing model to compute a cost-per-user based on the data in the
11 costing database and the price per unit of consumable resource per service;
12 and
13 billing the user for the cost computed by the costing model.

1 70. The computer-readable medium of claim 68, wherein the costing model supports:
2 fixed price per unit of usage;
3 variable price per unit usage as a function of usage;
4 flat price up to a maximum value of usage;
5 different prices for different users;
6 different prices for different services; and
7 different prices for increments of usage above a maximum subscribed usage.